OHIO STATE UNIVERSITY

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THE PLANT DISEASE REPORTER

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THE OFFICE OF MYCOLOGY AND DISEASE SURVEY

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CEREAL DISEASES

TWO DISEASE RESISTANT WHEATS

In a mimeographed leaflet (Characteristics and Performance of Hope and H-44 Wheats, J. Allen Clark; Office of Cereal Crops and Diseases, May 25) it is reported that two new hybrid wheat selections, Hope and H-44, seem to be immune from stem rust and loose smut and resistant to leaf rust and bunt.

These wheats are selections from a cross of Marquis X Yaroslav-emmer made in 1916.

In yield they compare favorably with other improved varieties. Baking and milling tests of Hope indicate satisfactory quality. These wheats should prove useful for planting in the spring wheat states and for further breeding purposes.

NO FLAG SMUT OF WHEAT FOUND IN ILLINOIS THIS YEAR

W. R. Jack, Inspector for the Illinois State Department of Agriculture, recently examined a considerable number of wheat fields in what was formerly the flag smut infested area in Illinois with negative results as follows (May 26).

St. Clair Co.

"Twenty-three fields were inspected east and south of Dupo and no indications of flag smut were seen. Mr. Tillman, the advisor of the county, said that no reports had come in for the last couple of years.

Madison Co.

"Only eleven fields were inspected, mainly because most of them were under water. I was fortunate in meeting the executive committee (for the county) none of whom had seen any smut in their fields nor heard of any infections this year.

BOTANY & ZOOLOGY LIBRARY

Jersey Co.

"Mr. Tillman, the advisor, had not had any reports of smut this year and I did not see any in the 27 fields inspected.

Logan Co.

"I made an inspection of 5 fields all in the area where the smut was found six years ago but there was no indication of any further infection as yet. Two of the fields were on farms where the smut was found originally."

STEM RUST OF WHEAT (PUCCINIA GRAMINIS)

Ohio: None found in scores of fields examined during week ending June 1. Wheat is so well advanced it may mature before rust causes much injury even though infection on barberries seems to be more prevalent this year than usual. (Barringer, June 1)

Georgia: Found the first wheat stem rust at Tifton. Apparently it had been very heavy on certain of the fiftieth acre plats, which were already harvested. There is some stem rust in the wheat stem rust nursery, but these varieties will soon be beyond reading. They are all sizes and some of them are dying and lodging badly. (H. C. Murphy, May 18)

Texas: At College Station an extremely heavy epidemic of stem rust occurred in wheat. Many varieties and hybrids were killed and set no seed.

At Beeville, 100 miles east of San Antonio, we found an even more severe epidemic of stem rust. All varieties were short and many were entirely killed. Even the durums were heavily infected, infection running as high as 40 per cent on Iumillio and 60 per cent on Vernal emmer. Einkorn had 40 per cent stem rust, but Webster showed only a trace, and Hope 5 per cent.

The most interesting thing about the results in these nurseries is the origin of the rust. No wheat is grown within many miles of both stations and no infection seems to have been present last fall. Some wheat is being grown about 100 miles west of Beeville.

Elsewhere in the state - only a trace could be found. (C. O. Johnston, May 13)

In Kansas no infection has been found as yet according to C. O. Johnston, May 23; while in California, Mackie, May 28, reports stem rust to be a rarity.

LEAF RUST OF WHEAT (PUCCINIA TRITICINA)

Ohio: Two per cent prevalence in central and western Ohio. (Barringer, June 8)

Illinois: Fifteen per cent infection. (H. C. Murphy, May 13)

Iowa: Developing rapidly on winter wheat. One field in Boone County showed 25 per cent infection. (R. H. Porter, May 27)

Kansas: Wheat is just beginning to head at Manhattan. There is a very small amount of leaf rust in most parts of the state but it is developing only very slowly. There is plenty of inoculum to cause a heavy infection before harvest if weather conditions become favorable. (C. O. Johnston, May 23)

Texas: An extremely heavy epidemic at College Station. Heavy infection at Denton. (C. O. Johnston, May 13 and 17)

Oklahoma: Most varieties of wheat were entirely free from leaf rust and only slight flecking was evident. (C. O. Johnston to H. B. Humphrey, May 23)

California: Some traces of leaf rust may be found. (W. W. Mackie, May 28)

LEAF BLOTCH OF WHEAT (SEPTORIA TRITICI)

According to C. O. Johnston (May 23 and June 6), this disease is severe throughout the southern Great Plains this spring and is causing considerable damage. In some localities the leaves are being prematurely dried up by it. He found heavy infections at all points in Texas and at Stillwater, Oklahoma. In fact the disease is causing far more injury to wheat at Stillwater and Manhattan, Kansas, at present, than leaf rust.

In California, W. W. Mackie reports (May 28) that Septoria tritici may be found in the wheat fields of northern California, but only on the lower leaves, within the first few inches of the ground. It is not nearly so destructive as usual.

ROOT ROT OF WHEAT IN MONTANA

"On May 20 about 10 per cent of the winter wheat in the central Montana area showed severe injury by root rot with 50 per cent showing the effects of the disease. The earlier seedings are the most heavily damaged, pointing clearly to the advisability of delaying winter wheat seeding in the central Montana district until after September 1." (Montana Agricultural Outlook, May 27)

BARLEY FROST INJURY IN CALIFORNIA

Frost injury during the present season has been very severe, damage occurring at the time the various cereals were heading. Late sown grain in which the head was well imbedded in the plant and close to the ground, did not suffer, but other more advanced varieties have shown injury over most of the state. Considerable varietal difference has been noted. The Hero, Club Mariout, and hybrids with these barleys in their composition have suffered in most places. (Mackie, May 28)

LEAF RUST OF BARLEY (PUCCINIA ANOMALA ROSTR.)

In Texas, according to C. O. Johnston (May 17-23), infection was heavy and was unusually severe on the Tennessee Winter variety.

The disease is also reported from Virginia (Cereal Courier, B.P.I. 21 (10), May 10) and from California (Mackie, May 28).

HELMINTHOSPORIUM DISEASES OF BARLEY

California: Stripe disease, Helminthosporium gramineum, appears in its usual quantity, namely, from a trace to about 5 or 6 per cent. It is most destructive on the Atlas barley, Coast and related types. The dry year appears to have had no effect whatever on changing the quantity of stripe disease found in the field.

Owing to the very dry year, H. teres and the spot blotch, H. sativum, failed to appear in the fall, and consequently little of this disease is found on barley at the present time.

On the contrary, rusty blotch, H. californicum, appears in many fields to be causing a great deal of injury especially to the upper leaves on the plant. It appears to be more destructive to the plants suffering from drouth, from cold injury, or from infertile soil. As usual, this disease appears late in the season - about the time the heads begin to exsert. (Mackie, May 28)

Iowa: Stripe, H. gramineum, is showing up in abundance on untreated seed planted the first week in April. Untreated rows in test plots at Ames show 25 per cent of the plants infected. In ten rod rows treated with chemical dust only one stripe plant has developed to date. (R. H. Porter, June 1)

COVERED SMUT OF BARLEY (USTILAGO HORDEI)

Maryland: Fields planted from untreated seed had from 0.5 per cent to 23 per cent covered smut. Fields planted from seed treated with organic mercury dusts had from none to a trace. (Jehle, June 11)

OATS BLAST

California: Blast occurs in the usual amounts, but is not serious owing to the widespread of the Kanota variety, which is highly resistant. (Mackie, May 28)

CROWN RUST OF OATS (PUCCINIA CORONATA)

Tennessee: I found the first crown rust about thirty miles west of Knoxville. Fortunately there was more rust there than anywhere near around. However, it was only a trace to 10 per cent, and extremely localized. Apparently it is all Form III, at least all of the varieties resistant to Form III were entirely free of rust. (H. C. Murphy, May 13)

Georgia: At Tifton I saw the most striking illustration of the effect of crown rust that I have ever seen. In the fiftieth-acre plots, which were already harvested and in shock, there were a number of different varieties, some susceptible to crown rust and some resistant. Certain of the resistant varieties such as Hastings 100 Bushel, Appler and other strains of Red Rustproof had produced large shocks that will thresh over a bushel of grain each. In contrast to this, some of the more susceptible varieties, such as Fulghum (Winter Farm) and Norton, were evidently killed by crown rust while still in the "boot" stage of maturity. The yield from these plots will be virtually nothing. The same contrast was evident in the crown rust nursery. Many of the more susceptible varieties had been completely killed before heading.

This year certain of the Red Rustproof varieties appear to be highly resistant to crown rust. However, in some years they are very susceptible to rust and greatly damaged. There appears to be a difference in the rust in different years. There are probably some other factors besides physiologic forms entering into this problem. This disease has been very serious in the state this year. (H. C. Murphy, May 18)

FRUIT DISEASES

APPLE SCAB PREVALENT

The following reports, together with other data at hand indicate that the present season has been favorable for scab development in most of our important apple producing states in Eastern United States. Unusually rainy weather of April and early May not only favored infection but in many cases greatly interfered with the application of sprays at the proper time. The result is a heavy infection in many commercial as well as home orchards.

New York: Further reports from New York counties in the Weekly News Letter of the Department of Entomology and Plant Pathology for June 10 are to the effect that scab is very prevalent this season, and that in unsprayed and improperly sprayed orchards the damage will be heavy. New York's two main fruit areas are Western New York and the Hudson Valley. In Dutchess County of the latter section the superiority of sprayed over dusted orchards is reported. In Western New York there are reports of as high as 90 per cent infection in some Onondaga County orchards, and of foliage turning brown and withering in some unsprayed Ben Davis orchards in Wayne County. Burning out of scab lesions by the hot weather of May 30 is mentioned in Niagara County. Good control is being obtained in properly sprayed orchards however. W. D. Mills states that the evidence seems quite conclusive that the first heavy infection in Western New York occurred during the warm rain period of April 20 and 21.

New Jersey: On May 9, on unsprayed Winesap, 63.1 per cent of the leaves were heavily scabbed. Where the delayed dormant, pre-pink and pink applications were applied 4 per cent of the leaves showed scab. No delayed dormant, 7.7; no pre-pink, 3.5; no pink, 40.4. In heavy commercial orchards it was impossible to apply a pink spray. As a result scab is very severe. (W. H. Martin, June 10)

Pennsylvania: During the past week a check-up of apple orchards in Berks, Bucks, Carbon, Lebanon, Lehigh, and Montgomery Counties gave the following facts: Orchards sprayed according to the spray service are practically free of scab (a total of 25 scabby leaves was found - about 1 scabby leaf in 500 - in the 14 orchards of this class visited). Very heavy scab infection of the leaves (26.8 per cent leaf infection) was found in the 4 orchards visited where the pre-blossom sprays had not been applied and in one case 30 per cent of fruit stem infection was observed, which will result in the dropping of all the fruit formed on the infected stems. In the two orchards visited where the first lime sulfur spray has been omitted 21.5 per cent of leaf infection was found. (Kirby, May 18)

Illinois: Apple scab, in general, is extremely abundant. This has been an ideal season for the disease and the failure of a number of growers to spray before the bloom, on account of adverse weather conditions, has resulted in enormous loss. Some orchards have lost most of their foliage on account of scab. The leaves were entirely covered with the diffused type of scab in these orchards. In other cases, such orchards when sprayed following infection were so badly burned by the spray material that they are losing all their foliage. (H. W. Anderson, June 7)

Michigan: Ascospores began discharging from the perithecia on the old leaves in the southern part of the state about March 21, in the central part about April 5, and in the northern part of the lower peninsula about April 9 and are still being discharged in all parts of the state. The first new scab lesions were collected from an unsprayed orchard near Fennville on May 6 and are very abundant at the present time on unsprayed and improperly timed sprayed orchards in all parts of the state. Infection on the young fruit was first noted on June 3 in an orchard in which nearly ten per cent of the fruit showed from one to five lesions. The indications are that Michigan will have a very severe scab year.

Excellent control of scab has resulted in orchards where the sprays have been properly timed. (Wedgworth, June 5)

Iowa: Scab is severe now in certain orchards even though they were sprayed. There are two possible reasons for this (1) the irregularity in the opening and dropping of the blossoms delayed the application of the calyx spray. The irregularity was due to cold periods of cloudy weather. The scab organism apparently started infection before the calyx spray was applied; (2) orchards surrounded by woodland showed more scab than others. Wild crab and hawthorn no doubt were sources of infection. (R. H. Porter, June 1)

Arkansas: Extremely prevalent on both fruit and leaves, especially in unsprayed and poorly sprayed orchards. Weather was very unfavorable for the application of the cluster bud spray and many growers were very late in putting on the calyx spray. The prospect is for a great deal of scab even in fairly well sprayed orchards. Scab on the stems of apples seems to be rather prevalent in some orchards, being noted especially on the Delicious variety. (V. H. Young, June 7)

BLIGHT OF APPLE AND PEAR

Three Northcentral States, Illinois, Michigan, and Iowa, now report severe damage from blight of pear and apple. The wet season, much of which was unfavorable for the activity of bees and other insects and which was more than twice as wet as normal in most of our eastern apple sections, would lend support to the theory that rain is an important agent for dissemination of the fire blight organism.

Illinois: Fire blight of both apple and pear has been on the increase during the last two weeks. Most of the injury is in the form of twig blight and very little damage was done during the blooming period from blossom blight. On account of the continued cool wet weather, the disease has been working down into the trees farther than usual. (H. W. Anderson, June 7)

Michigan: Fire blight is very severe in at least three orchards in the southern part of the state. In one orchard between 80 and 90 per cent of the blossoms were blighted. A great many trees will be destroyed by the disease in this orchard. At this time the total damage caused by fire blight has been very small. (Wedgworth, June 5)

Iowa: Twig blight, blossom and leaf blight are severe now in many orchards. (R. H. Porter, June 1)

APPLE CEDAR RUST

Specimens of green apple fruit affected with Gymnosporangium were collected May 29 at Jackson, Tennessee, and sent in by J. A. McClintock of that state. The fruits were locally malformed especially at the blossom-end and the pycnia were just beginning to form. It was said to be most serious on Delicious, but was also present on Stayman and Winesap.

From Iowa, R. H. Porter writes on May 15 that conditions have been favorable in northwest Iowa for another attack this year, and from Arkansas, V. H. Young reports (June 7) that the rust has been extremely prevalent on the cedars this season and promises to be destructive on apples near cedars.

OTHER APPLE DISEASES

Frog-eye leaf spot (Physalospora malorum). Rather prevalent in Arkansas especially in orchards which have not been properly pruned and sprayed. (V. H. Young, June 7)

Fruit spot (Phoma pomi). In Pennsylvania where this fruit spot was a factor in 1928 a 2-4-50 Bordeaux 17 to 28 days after petal fall is being recommended instead of 1.006 lime sulfur. (Kirby, May 18)

Blotch (Phyllosticta solitaria). Very abundant this season in Illinois. Infection probably took place about three weeks ago. (H. W. Anderson, June 7)

Powdery mildew (Podosphaera leucotricha). In some plantings of Rome in New Jersey nearly every terminal shoot showed infection on May 2. (W. H. Martin, June 10)

Spray injury. In Illinois injury from lime sulfur has been quite general on apples throughout the state this season. A number of growers claim that the injury from the spray material has caused more loss of fruit than the diseases for which the sprays were applied. The injury is due in part to weather conditions and partly to the fact that in a number of orchards the scab lesions were extremely abundant and consequently severe burning occurred following the application of lime sulfur. (H. W. Anderson, June 7)

CHERRY LEAF SPOT (COCCOMYCES HIEMALIS)

Reports of leaf spot have been received from several states. It is important to distinguish between this leaf spot and the spot caused by Bacterium pruni as the two are sometimes confused especially in the early stages.

New York: Appearing in several orchards in Orange, Columbia, Chautauqua and Genessee Counties. (New York State College Weekly News Letter, June 10)

New Jersey: Present in some orchards; unusually early. (W. H. Martin, June 10)

Michigan: The ascospores of the cherry leaf spot fungus are very abundant this season. They were mature on a few old leaves in the college orchard on April 5. An abundance of spores were being discharged on April 25 in the southern part of the state. Lesions have been found on the sweet and sour cherry in many sections of the state. (Wedgworth, June 5)

Arkansas: Noted in a severe form and with the wet weather and difficulty in spraying which has been encountered will probably cause considerable damage this year. (V. H. Young, June 7)

MORE REPORTS ON PEACH LEAF CURL

New Jersey: Reported from Morris, Essex, and Cape May Counties. More abundant than usual. (W. H. Martin, June 10)

Michigan: The cool, wet weather prevalent during the past few weeks has been very favorable for leaf curl infection. The extremely wet weather during the early spring prevented the spraying of many orchards for curl and the results are that leaf curl is unusually severe. About 75 or 80 per cent of the leaves in unsprayed orchards are badly infected with this disease. (Wedgworth, June 5)

Iowa: A severe epidemic of this disease has occurred wherever peaches are grown and no dormant spray was applied. (R. H. Porter, June 1)

Arkansas: Fairly prevalent but not in the severe form that has been seen in a number of years recently and apparently little damage is resulting. One of the interesting features noted in connection with this disease is the presence of the disease on younger leaves of twigs, the older leaves being free from the disease, a condition probably correlated with more favorable weather for the development of curl after the first leaves had come out than before. (V. H. Young, June 7)

BACTERIAL SPOT OF PEACH

REPORTS WANTED

Reports are especially desired concerning the situation with regard to this disease both on account of its importance and because of interest in results that may be obtained in its control by the use of zinc-sulphate or other sprays. (Phytopath. 19: 106-107. 1929). H. W. Anderson of Illinois writes on June 1 that the spot is becoming fairly abundant and that some is being found on the fruit. Defoliation is not marked in the orchards as yet however. On the other hand in certain peach orchards near Lynchburg, Virginia, defoliation and spotting of the fruit is already severe.

PEACH BROWN ROT

New Jersey: Heavy infection in some orchards when the trees were in full bloom. Of minor importance where a pink spray application had been made. (W. H. Martin, June 10)

Pennsylvania: Infection of peach twigs is becoming quite common. As high as 9 infected or killed twigs were counted on trees in Bucks County on May 16. (Kirby, May 18)

OTHER FRUIT DISEASE REPORTS

PEAR scab (Venturia pyrina). Five per cent leaf infection in an orchard in Perry County, Pennsylvania, on May 10 by R. S. Kirby. H. H. Wedgworth on June 5 wrote that scab is very severe in some unsprayed Michigan pear orchards.

Bitter rot (Glomerella cingulata). The imperfect stage of this fungus developed on a blighted pear twig and leaves collected in the District of Columbia and brought into the laboratory and kept in the ice box for about two weeks. (G. H. Martin)

STRAWBERRY leaf spot (Mycosphaerella fragariae) and leaf scorch (Diplocarpon earliana). Noted rather commonly but do not appear to have caused any serious damage. (V. H. Young, Arkansas, June 7)

RASPBERRY anthracnose (Plectodiscella veneta). Very severe in Michigan on the old canes in many blackcap fields. New lesions abundant on new canes in unsprayed fields. (Wedgworth, June 5)

GOOSEBERRY powdery mildew (Sphaerotheca mors-uvae). Noted by the writer for the first time in a severe form in Arkansas. (V. H. Young, June 7)

PECAN SCAB IN GEORGIA

To date only leaf infection with Cladosporium effusum has appeared, it being too early for nut infection. Generally, primary infection of leaves and young shoots is heavier than any year since observations began in 1925. Only a relatively dry summer lasting through July will save the crop in such varieties as Schley, Delmas, Van Deman, Alley, Goergia, that is, where spraying or dusting is not practiced. Otherwise, especially if infection periods are unusually numerous during June and July, it will even be difficult to secure anything like commercial control with a protection program. (O. C. Boyd, June 7)

NOTICES

The joint summer meeting of the American Phytopathological Society and its Southern Division will convene at Raleigh, North Carolina on July 29 and will terminate at Hamlet, North Carolina July 31. Persons planning to attend should communicate with R. F. Poole, President of the Southern Division.

Notice has recently been received of a potato seed certification conference at Freehold, New Jersey June 24 and 25. The conference will assemble at the County Agent's office, Court House at 9:15 A.M. (Eastern Standard).

Notice of the Accomac County, Virginia and the Worcester County, Maryland. potato tours of June 20 and 21 respectively have just been received. Although this is primarily for growers, it is a good opportunity for pathologists or others interested to see potatoes on the Eastern Shore.

A potato virus disease exhibit will be staged in the greenhouses at Ames, Iowa, in connection with the winter meeting of the American Phytopathological Society, December, 1929. Investigators desiring to have diseased plants on exhibition are invited to send tubers and to communicate with Dr. I. E. Melhus who is making the arrangements. R. J. H.

VEGETABLE DISEASES

LEAF ROLL AND MOSAIC OF POTATO IN MARYLAND

"On account of the small demand and low price of Maryland second crop Irish Cobbler uncertified home grown seed, many potato growers in Worcester and Somerset Counties on the eastern shore of Maryland planted their own seed. When the second crop of Cobbler seed was inspected for certification last year, much of it was found to be severely infected with leaf roll and mosaic and a large percentage of the growers were disqualified. Potato growers were warned through the press and other agencies that uncertified home grown seed was so seriously diseased that it would be unprofitable to plant it. In spite of this warning, much of it was planted this spring. Many potato fields in Worcester and Somerset Counties were inspected during the week of June 10 and fields planted from uncertified home grown seed had from 15 to 50 per cent leaf roll and 10 to 25 per cent mosaic. These fields were suffering severely from a long drought which was broken by the rains during the latter part of the week. Fields planted from home grown and northern certified seed had only a trace to 4 per cent leaf roll and mosaic and were only slightly injured by the drought. It is estimated that at least 50 per cent of the fields in these counties were planted with home grown or northern grown certified seed." (Jehle, June 11)

GEORGIA TOMATO PLANT DISEASE SITUATION

"The plant shipping season is just now over. About 2,000 acres were seeded to tomatoes this spring and unusually good quality, well developed plants were available throughout most of the shipping season. Bacterium vesicatorium spot was more prevalent than usual, nematode root knot about the same as usual, and Macrosporium leaf blight and stem lesions less than last year. Wilts and bacterial canker were not observed in any of the fields and the leaf spots mentioned remained in the incipient stages, generally, until the latter part of the pulling season when Macrosporium spread rapidly in some fields. Many fields remained free from foliage or stem diseases throughout the season. In one 60 acre field of newly stumped land, first year soil, early blight and collar rot (Macrosporium) obtained a general and early start and continued to spread rapidly indicating seed as source. The same situation was noticed in old land fields where certain sources of seed were used. Other sources of seed in the same fields did not develop the disease until late in the season.

"An extensive seed source test that is now being conducted is throwing a great deal of light on the question of the source of origin of these diseases that develop in the plant fields of this

state. Nearly everyone of the forty odd lots of seed used, representing different varieties or sources of seed, developed either early blight (and stem cankers) or bacterial spot, or both, regardless of whether or not the seed had been treated (either by the seed-saving firm, the planter, or myself.) This probably accounts at least in part for the heavy infection that often occurs in newly cleared land or on old land following such crops as cotton, corn, etc. Tomatoes are not grown to maturity, commercially, in any of the plant-growing sections." (Boyd, June 7)

BACTERIAL CANKER (APLANOBACTER MICHIGANENSE) OF TOMATO

In Georgia, according to O. C. Boyd (June 7), bacterial canker has been observed so far this year only in Coffee County, where 100 acres of the Globe variety are grown for the early market. It is much less prevalent than in former years. About 5 to 10 per cent of the plants are affected and the probable loss is estimated by Boyd at 3 to 8 per cent. The disease was not observed this year in any of the commercial plant fields.

L. E. Miles reported (June 7) that three-fourths of the fruit from one 40 acre field in the Crystal Springs section of Mississippi was unmarketable due to bacterial canker. More details about this infestation have been reported by Miss Bryan (Pl. Dis. Reptr. 13: 24. June 1. No. 2).

TOMATO DISEASES IN GEORGIA

Besides bacterial canker mentioned above, O. C. Boyd reports the following diseases (June 7):

"Fusarium lycopersici seems to be unusually prevalent wherever susceptible varieties are planted this year. In the 100 acres in Coffee County, where the Globe variety is being grown for early market, the loss will probably run around 15 to 20 per cent. There was only a trace on the same farm last year. It is evenly distributed in several fields this year, indicating either seed or compost as source of infection."

"Septoria lycopersici is more common than usual in the spring crop where it ordinarily entails little or no loss. The 100-acre planting in Coffee County shows 100 per cent plant infection with about 30 to 40 per cent defoliation and the harvest is not yet at its peak. Noticeable reduction in size of fruits is evident (June 4) and will constitute the principal type of loss from this disease. Spraying was not started until considerable headway had been made by the disease. Probable loss, 20 to 25 per cent. Very little spot was observed in the commercial plant fields this year, even during the last of the plant-pulling season."

OTHER TOMATO DISEASES

Bacterium vesicatorium

Mississippi: On a number of properties in Crystal Springs trucking districts. On infested properties, high percentage of fruit rendered unsalable. (Miles, June 7).

Illinois: Serious on leaves on a few vines in a greenhouse. Not seen on fruit. (Anderson, April 26).

Ascochyta lycopersici:

New Jersey: Found on leaves and stems in a seed bed in Cumberland County. (Martin, June 10).

BEAN DISEASES IN SOUTHERN GEORGIA AND MISSISSIPPI

Georgia: Snap bean harvest season lasted from around May 1 to 15 this year and the yield was generally good. The season as a whole was cool with moderate rainfall. As a result, anthracnose (Colletotrichum lindemuthianum) and bacterial halo blight (Bacterium medicaginis phaseolicola) were common, while Bacterium phaseoli blight and Macrophoma stem blight were less common than usual, as well as Sclerotium rolfsii wilt. Fusarium root rot was about as prevalent as usual with only slight damage. The only fungous leaf spot observed was Cercospora sp., and it appeared only at the end of the season on old leaves.

"The outstanding feature among the bean diseases this season was the presence of remarkably well developed symptoms of the primary or systemic stage of the halo blight, especially in the Bountiful variety. Anthracnose was much worse than usual, overrunning many fields during the latter part of the season that showed only a trace or none at the outset. Losses: Halo blight 10 per cent; blight 2 per cent; anthracnose 3 per cent; root rots 2 per cent." (Boyd, June 7).

Mississippi: "One canning company reports 350 growers with 10 to 100 per cent anthracnose infection. Appearing elsewhere but not where Far Western grown seed is used.

"Bacterium phaseoli general, many fields a total loss." (Miles, June 7).

PEA ROOT ROT (APHANOMYCES EUTEICHES) SEVERE IN NEW JERSEY

"Very severe - some fields showed advanced stages of rot as early as May 3. This disease was observed to be especially severe in fields which had received eight applications of fertilizer." (Haenseler, June 10).

MISCELLANEOUS REPORTS ON DISEASES OF VEGETABLES AND FIELD CROPS

COTTON soreshin (Rhizoctonia) is causing more than the usual damage in Arkansas. (V. H. Young, June 7).

OKRA diseases in southern Georgia. A Cercospora leaf spot and Fusarium wilt are very common in garden plots and commercial fields this year. In two gardens in Albany, a type of leaf spotting has been observed that resembles ring spot of tobacco. This is the first time I have observed the trouble. (O. C. Boyd, June 7).

RADISH black root (Aphanomyces raphani) is common on Icicle radish in the University of Illinois gardens at Urbana. (H. W. Anderson, June 5).

SWEET POTATO black rot (Sphaeronema fimbriatum) is causing severe injury on slips. (V. H. Young, June 7).

DISEASES OF HERBACEOUS ORNAMENTALS

NEMATODE OF PHLOX

Two beds of phlox plants infested with the stem nematode were recently observed in the New York Botanic Garden and near Moorestown, New Jersey. Many of the plants were stunted and the stems were swollen and cracked. The leaves were distorted and crinkled and in severe cases reduced to thread-like forms. Occasionally a diseased plant would show one or two healthy shoots.

Some of the material was referred to Dr. Steiner who identified it as Tylenchus dipsaci Kuhn.

This is the third report to the Plant Disease Survey of its occurrence in the United States. The other two findings were in Connecticut and New Jersey. (Aline Fenner, June 12).

NOTES ON KABATIELLA MICROSTICTA FOUND ON LILY, IRIS AND LILY OF THE VALLEY

Specimens of diseased Lilium spp. (L. candidum, L. longiflorum, L. regale and others) have been received from New Jersey, Pennsylvania, District of Columbia, Florida, and Texas by Freeman Weiss, from Maryland by Miss Vera K. Charles and collected in New York and District of Columbia by the writer. In a number of cases, the disease was reported to be severe.

On a recent field trip, Miss Aline Fenner, Dr. R. P. White and the writer observed a serious blighting and leaf spot of Iris germanica in several plantings in New Jersey and at the New York Botanical Garden. The latter has also found the same disease in gardens in the District of Columbia. The early symptoms are a dying of the leaf tips with a slow dying downward or

downward or a spotting of the leaf. In an acute attack, the entire plant may be blighted, in which case the leaves present a scorched, water-soaked appearance with a slight purplish cast. An entire clump may be affected or only partially so.

The leaf spot of the Lily of the Valley was called to our attention by Dr. White when we visited the New York Botanical Garden in company with B. O. Dodge. The writer has also collected material in the District of Columbia and has made isolations from this as well as the New York material. In each instance the organism isolated corresponded to the description for Kabatiella microsticta. This organism appeared to be the causal agent of the leaf spot or blight.

This appears to be the first report of the finding of this organism on the iris as well as the first report for the United States on the Lily of the Valley. (G. Hamilton Martin, June 12).

MOSAIC DISEASE OF MERTENSIA VIRGINICA

While on a day's trip with Dr. R. P. White in New Jersey on May 21, we discovered a very serious type of mosaic on Martensia virginica. The plants were growing in a garden scattered through a border where tulips and herbaceous perennials were planted. At least 90 per cent of the plants were badly affected with the mosaic disease. Probably thirty or forty plants all told were observed in these beds. The leaves were strongly marked with large chlorotic areas. Affected plants were decidedly stunted as compared with the healthy ones. While they had nearly completed blossoming, it was evident that the flower clusters of diseased plants were much smaller and produced fewer flowers. As this interesting perennial is being more and more planted in gardens, it seems worth while to record this destructive occurrence of a mosaic of this plant. So far as the writer knows the mosaic of Mertensia has not been recorded heretofore. (H. H. Whetzel, June).

DISEASES OF TREES AND SHRUBS

WILLOW SCAB

The recent bulletin by Clinton and McCormick ("The Willow Scab Fungus," Fusicladium saliciperdum, Conn. Agr. Exp. Sta. Bulletin 302:443-469. Pls. 9-16. March 1929) emphasizes the fact that this disease may become of increasing importance in the United States and brings to mind the desirability of learning more in regard to the distribution and nature of this parasite. It has the appearance of being an introduced foreign parasite which is spreading.

Clinton and McCormick have found this disease occurring locally in practically all of the New England states and in New York and occurring generally in parts of Nova Scotia, New Brunswick, and Prince Edward Island.

The disease is evidently capable of causing severe damage. At Norfolk, Connecticut and Hancock County, Maine and in the Canadian Provinces, it was causing severe injury. Last year in the Provinces, hundreds of dead trees were seen and many more were badly injured and fast approaching destruction. In the case of this disease, leaves and twigs are killed early in the season and sometimes the second and third sets of leaves which are put out are also attacked. Two or three seasons of severe defoliation in succession so weakens the trees that starvation and winter injury soon finish them.

Many different species of willow are attacked. Clinton and McCormick have found eight species affected in Connecticut. There seems to be variation in the susceptibility of different species, however, and this fact gives hope for eventual control.

Although the willow is not an especially valuable tree as far as timber is concerned, it is very useful as an ornamental and shade tree; also for growing along the banks of river courses and streams to assist in keeping them within their courses. It is therefore important at this time when flood control measures for our great river systems are being undertaken, to determine the facts concerning this and other diseases of willow. At the outset, it is important to know more about the distribution of scab. We are therefore bringing this to the attention of collaborators and others with the request that they make special efforts to examine willows for it, and if it is found, send a report of the occurrence together with specimens to this office. In connection with this, other diseases of willow should also be watched for and reported. Clinton and McCormick point out that there are other fungi, especially species of Physalospora and Gloeosporium, frequently associated with the Fusicladium. In collecting information and specimens, the species of willow should be ascertained, and for this reason it would be desirable to have specimens of healthy as well as diseased leaves and twigs. (R. J. Haskell).

SPECIMENS RECEIVED

Botryosphaeria ribis Gross. & Dug., leaf blight, on Rhododendron maximum. Waltham, Massachusetts received from E. F. Guba, May 17. Det. by C. L. Shear. First report from any state.

Septoria aceris (Lib.) Berk. & Br., leaf spot, on Acer glabrum. Superior, Montana received from P. A. Young, April 23. Det. by W. A. Archer. First report this state.

Cytospora chrysosperma (Pers.) Fr. on Salis nigra. Wells, Nevada, received from Thomas Buchman, May 28. Det. by R. Davidson. First report from any state on S. nigra.

Valsa leucostoma (Pers.) Fr., die-back on Sorbus aucuparia. Cincinnati, Ohio, received from O. T. Wilson, June 3. Det. by O. T. Wilson, First report from any state on S. aucuparia.

Cladosporium herbarum (Pers.) Lk., blight. On Syringa vulgaris. Collected in New York, New Jersey, and District of Columbia by G. Hamilton Martin, May and June. Det. by G. Hamilton Martin. Syn.: Helminthosporium syringae Klebahn, Heterosporium syringae Oud., Aureobasidium syringae Arnaud. First report for the United States.